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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,620

Applicant(s)

YURUGI ET AL.

Examiner

Wei-po Kao

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
3. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejection - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11, 12, 13 and 14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The Claims 11, 12, 13 and 14 are directed to a non-statutory subject matter because the claimed terms, "a computer for causing a computer to execute the steps of ...," and "a recording medium" are not process, machine, manufacturer, or composition of matter, or any new and useful improvement thereof.

Note: To overcome the rejection, it is suggested to the applicant to amend the claims to be written in terms of "computer" readable medium, stored with, embodied with or encoded with a "computer" program or computer executable instructions.

Claim Rejection - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4, 6, 8, 9, 10, 11, 12, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheung et al, US Patent No 5812531.

Regarding Claim 1, Cheung et al disclose that **a wireless communication system** (see Abstract, Figures 1-4), **comprising: a first wireless communication unit including first wireless communication means that performs-wireless data communication** (see Figure 3 Element AP1, Figure 7 Elements 830 and 835, Column 3 Line 11-13), **first wired communication means** (see Figure 3 Element AP1, Figure 7 Elements 837 and 838, Column 3 Line 11-13) **that performs, before establishing a wireless link for performing the wireless data communication, wired data communication for transmitting information which is necessary when establishing the wireless link using a wired connection** (see Figure 3 Elements 130 135 140, Column 3 Line 53-58, Column 8 Line 20-27 56-61, Column 11 Line 50-61 i.e. registration process, which includes transmitting multicast message through wired LAN, has to be processed for each AP and wireless node pair before the APs can relay information for their registered wireless node through wireless means), **and first change-over means that changes over whether the wireless data communication should be performed using the first**

wireless communication means or the wired data communication should be performed using the first wired communication means (see Figure 7 Elements 810 and 840, Column 3 Line 14-25 30-31 39-42, Column 12 Line 25-33); a second wireless communication unit including second wireless communication means that performs the wireless data communication with the first wireless communication means (see Figure 3 Element AP2, Figure 7 Elements 830 and 835, Column 3 Line 11-13), second wired communication means that performs, with the first wired communication means (see Figure 3 Element AP2, Figure 7 Elements 837 and 838, Column 3 Line 11-13), before establishing the wireless link, wired data communication for receiving the transmitted information using the wired connection (see Figure 3 Elements 130 135 140, Column 3 Line 53-58, Column 8 Line 20-27 56-61, Column 11 Line 50-61 i.e. registration process, which includes transmitting multicast message through wired LAN, has to be processed for each AP and wireless node pair before the APs can relay information for their registered wireless node through wireless means), and second change-over means that changes over whether the wireless data communication should be performed using the second wireless communication means or the wired data communication should be performed using the second wired communication means (see Figure 7 Elements 810 and 840, Column 3 Line 14-25 30-31 39-42, Column 12 Line 25-33).

Regarding Claim 4, Cheung et al disclose that a wireless communication unit comprising: first wireless communication means that performs wireless data communication (see Figure 3 Element AP1, Figure 7 Elements 830 and 835, Column 3 Line 11-13); first wired communication means that performs wired data communication (see Figure 3 Element AP1,

Figure 7 Elements 837 and 838, Column 3 Line 11-13) to establish a wireless link for performing the wireless data communication using a wired connection (see Figure 3 Elements 130 135 140, Column 3 Line 53-58, Column 8 Line 20-27 56-61, Column 11 Line 50-61); and first change-over means that changes over whether the wireless data communication should be performed using the first wireless communication means or the wired data communication should be performed using the first wired communication means (see Figure 7 Elements 810 and 840, Column 3 Line 14-25 30-31 39-42, Column 12 Line 25-33).

Regarding Claim 6, Cheung et al disclose that a wireless communication unit comprising: second wireless communication means that performs, with first wireless communication means that performs wireless data communication, the wireless data communication (see Figure 3 Element AP2, Figure 7 Elements 830 and 835, Column 3 Line 11-13); second wired communication means that performs, with first wired communication means that performs wired data communication (see Figure 3 Element AP2, Figure 7 Elements 837 and 838, Column 3 Line 11-13) to establish a wireless link for performing the wireless data communication using a wired connection, the wired data communication using the wired connection (see Figure 3 Elements 130 135 140, Column 3 Line 53-58, Column 8 Line 20-27 56-61, Column 11 Line 50-61); and second change-over means that changes over whether the wireless data communication should be performed using the second wireless communication means or the wired data communication should be performed using the

second wired communication means (see Figure 7 Elements 810 and 840, Column 3 Line 14-25 30-31 39-42, Column 12 Line 25-33).

Regarding Claim 8, Cheung et al disclose that **a wireless communication method comprising** (see Abstract): **a first wireless communication step of performing, using first wireless communication means that performs wireless data communication, wireless data communication** (see Figure 3 Element AP1, Figure 7 Elements 830 and 835, Column 3 Line 11-13); **a first wired communication step of performing, using first wired communication means that performs wired data communication** (see Figure 3 Element AP1, Figure 7 Elements 837 and 838, Column 3 Line 11-13) **to establish a wireless link for performing the wireless data communication using a wired connection, wired data communication** (see Figure 3 Elements 130 135 140, Column 3 Line 53-58, Column 8 Line 20-27 56-61, Column 11 Line 50-61); **a first change-over step of changing over, using first change-over means that changes over whether the wireless data communication should be performed using the first wireless communication means or the wired data communication should be performed using the first wired communication means** (see Figure 7 Elements 810 and 840, Column 3 Line 14-25 30-31 39-42, Column 12 Line 25-33); **a second wireless communication step of performing, using second wireless communication means that performs the wireless data communication with the first wireless communication means, wireless data communication** (see Figure 3 Element AP2, Figure 7 Elements 830 and 835, Column 3 Line 11-13); **a second wired communication step of performing, using second wired communication means that performs the wired data communication with the first wired communication means using**

the wired connection, wired data communication (see Figure 3 Element AP2, Figure 7 Elements 837 and 838, Column 3 Line 11-13); **and a second change-over step of changing over, using second change-over means that changes over whether the wireless data communication should be performed using the second wireless communication means or the wired data communication should be performed using the second wired communication means** (see Figure 7 Elements 810 and 840, Column 3 Line 14-25 30-31 39-42, Column 12 Line 25-33).

Regarding Claim 9, Cheung et al disclose that **a wireless communication method comprising** (see Abstract): **a wireless communication step of performing, using first wireless communication means that performs wireless data communication, wireless data communication** (see Figure 3 Element AP1, Figure 7 Elements 830 and 835, Column 3 Line 11-13); **a wired communication step of performing, using first wired communication means that performs wired data communication** (see Figure 3 Element AP1, Figure 7 Elements 837 and 838, Column 3 Line 11-13) **to establish a wireless link for performing the wireless data communication using a wired connection, wired data communication** (see Figure 3 Elements 130 135 140, Column 3 Line 53-58, Column 8 Line 20-27 56-61, Column 11 Line 50-61); **and a change-over step of changing over, using first change-over means that changes over whether the wireless data communication should be performed using the first wireless communication means or the wired data communication should be performed using the first wired communication means** (see Figure 7 Elements 810 and 840, Column 3 Line 14-25 30-31 39-42, Column 12 Line 25-33).

Regarding Claim 10, Cheung et al disclose that **a wireless communication method, comprising** (see Abstract): **a wireless communication step of performing wireless data communication, using second wireless communication means that performs, with first wireless communication means that performs wireless data communication, said wireless data communication** (see Figure 3 Element AP2, Figure 7 Elements 830 and 835, Column 3 Line 11-13); **a wired communication step of performing wired data communication, using second wired communication means that performs, with first wired communication means that performs wired data communication** (see Figure 3 Element AP2, Figure 7 Elements 837 and 838, Column 3 Line 11-13) **to establish a wireless link for performing said wireless data communication using a wired connection, said wired data communication using said wired connection** (see Figure 3 Elements 130 135 140, Column 3 Line 53-58, Column 8 Line 20-27 56-61, Column 11 Line 50-61); **and a change-over step of changing over, using second change-over means that changes over whether said wireless data communication should be performed using said second wireless communication means or said wired data communication should be performed using said second wired communication means** (see Figure 7 Elements 810 and 840, Column 3 Line 14-25 30-31 39-42, Column 12 Line 25-33).

Regarding Claim 11, it is a program claim corresponding to the method claim 8, and therefore rejected under the same reason set forth in the same section of claim 8 in this paragraph.

Regarding Claim 12, it is a program claim corresponding to the method claim 9, and therefore rejected under the same reason set forth in the same section of claim 9 in this paragraph.

Regarding Claim 13, it is a program claim corresponding to the method claim 10, and therefore rejected under the same reason set forth in the same section of claim 10 in this paragraph.

Regarding Claim 14, Cheung et al disclose that **a recording medium bearing a program, wherein the recording medium can be processed by a computer** (see Column 12 Line 18-25).

Claim Rejection - 35 USC § 103

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2, 5, 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al, US Patent No 5812531 in view of Lev et al, U.S. Patent No 5987327.

Regarding Claims 2, 5 and 7, Cheung et al disclose that **the wireless communication system, wherein the first wireless communication unit further includes first wired connection detecting means that detects whether or not the wired connection is being performed between the first wired communication means and the second wired communication means** (see Column 3 Line 26-30, Column 6 Line 1-4, Column 12 Line 18-25 i.e. the fact the wired LAN has MAC protocol inherently provide the connection detection mechanism; also the mechanism of switching between wired and wireless connection must provide the connection detection mechanism); **when the first wired connection detecting means detects that the wired connection is being performed, the first change-over means changes over so that the wired data communication is performed** (see Figure 7 Elements 810 and 840, Column 3 Line 14-25 30-31 39-42, Column 12 Line 25-33). However, Cheung et al do not disclose that **using the wired connection detected by the first detecting means, gives a change-over instruction to the second change-over means to change over so that the wired data communication is performed; the second change-over means changes over, based on the change-over instruction given by the first change-over means, so that the wired data communication is performed.** Lev et al from the same field of endeavor teach that **using the wired connection detected by the first detecting means, gives a change-over instruction to the second change-over means to change over so that the wired data communication is performed; the second change-over means changes over, based on the change-over instruction given by the first change-over means, so that the wired data communication is performed** (see Abstract, Figure 1 Elements 101-103 141-142, Column 4 Line 47-51, Column 13 Line 1-10). At the time

of the invention, it would have been obvious to a person ordinary skill in the art to implement the control messages delivering between two APs. The rationale would have been that the quality of the communication between the two APs can be managed with controllable degree of certainty.

Regarding Claim 15, Cheung et al disclose that **a wireless communication unit comprising: first wireless communication means that performs wireless data communication** (see Figure 3 Element AP1, Figure 7 Elements 830 and 835, Column 3 Line 11-13); **first wired communication means that performs wired data communication** (see Figure 3 Element AP1, Figure 7 Elements 837 and 838, Column 3 Line 11-13) **to establish a wireless link for performing the wireless data communication using a wired connection** (see Figure 3 Elements 130 135 140, Column 3 Line 53-58, Column 8 Line 20-27 56-61, Column 11 Line 50-61); **first change-over means that changes over whether the wireless data communication should be performed using the first wireless communication means or the wired data communication should be performed using the first wired communication means** (see Figure 7 Elements 810 and 840, Column 3 Line 14-25 30-31 39-42, Column 12 Line 25-33); **and first wired connection detecting means that detects whether or not the wired connection is being performed between the first wired communication means and second wired communication means that performs the wired data communication with the first wired communication means using the wired connection** (see Column 3 Line 26-30, Column 6 Line 1-4, Column 12 Line 18-25 i.e. the fact the wired LAN has MAC protocol inherently provide the connection detection mechanism; also the mechanism of switching between wired and wireless connection must provide the connection detection mechanism), **when third wired connection**

detecting means, which detects whether or not the wired connection is being performed between the first wired communication means and third wired communication means that performs wired data communication with the first wired communication means using a wired connection, detects that the wired connection is being performed, third change-over means, which changes over whether the wireless data communication should be performed using third wireless communication means that performs the wireless data communication with the first wireless communication means or the wired data communication should be performed using the third wired communication means, changes over so that the wired data communication is performed using the third wired communication means (same reasoning as for first and second wired/wireless communication, change-over and detection means presented above; also Cheung et al suggest plurality of APs-more than two, can be interconnected with the wired LAN). However, Cheung et al do not disclose that **when the first wired connection detecting means detects the wired connection is being performed, the first change-over means changes over so that the wired data communication is performed, and using the wired connection detected by the first wired connection detecting means, gives a change-over instruction to second change-over means, which changes over whether the wireless data communication should be performed using second wireless communication means that performs the wireless data communication with the first wireless communication means or the wired data communication should be performed using the second wired communication means, to change over so that the wired data communication is performed; change over so that the wired data communication is performed using the third wired communication means, and using the detected wired connection, gives a**

change-over instruction to the first change-over means, to change over so that the wired data communication is performed, and the first change-over means changes over, based on the change-over instruction given by the third change-over means, so that the wired data communication is performed. Lev et al from the same field of endeavor teach that when the first wired connection detecting means detects the wired connection is being performed, the first change-over means changes over so that the wired data communication is performed, and using the wired connection detected by the first wired connection detecting means, gives a change-over instruction to second change-over means, which changes over whether the wireless data communication should be performed using second wireless communication means that performs the wireless data communication with the first wireless communication means or the wired data communication should be performed using the second wired communication means, to change over so that the wired data communication is performed (see Abstract, Figure 1 Elements 101-103 141-142, Column 4 Line 47-51, Column 13 Line 1-10); change over so that the wired data communication is performed using the third wired communication means, and using the detected wired connection, gives a change-over instruction to the first change-over means, to change over so that the wired data communication is performed, and the first change-over means changes over, based on the change-over instruction given by the third change-over means, so that the wired data communication is performed (same reasoning as for first and second wired/wireless communication, change-over and detection means presented above; also both Cheung et al and Lev et al suggest plurality of APs-more than two, can be interconnected with the wired LAN). At the time of the invention, it would have been obvious to a person ordinary

skill in the art to implement the control messages delivering between multiple APs. The rationale would have been that the quality of the communication between the two APs can be managed with controllable degree of certainty.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung et al, US Patent No 5812531 and Lev et al, U.S. Patent No 5987327 as applied to claim 2 above, and further in view of Fong U.S. Publication No 20050249169.

Regarding Claim 3, Cheung et al and Lev et al disclose all the limitations in claim 2 except that **the wireless communication system, wherein the first wireless communication unit further includes a first signal level adjusting means that, when the first wired connection detecting means detects that the wired connection is being performed, adjusts a signal level so that the wired data communication is performed using a signal level smaller than the signal level necessary for said wireless data communication.** Fong from the same field of endeavor teach that **the wireless communication system, wherein the first wireless communication unit further includes a first signal level adjusting means that, when the first wired connection detecting means detects that the wired connection is being performed, adjusts a signal level so that the wired data communication is performed using a signal level smaller than the signal level necessary for said wireless data communication** (see Abstract, [0040]. i.e. a wired communication link is generally more stable than a wireless link, thus for a system, which is able to select either one for communication and adjust signal strength, it is obvious to

adjust signal strength so that wireless has greater value). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the signal level adjustment mechanism to a system with communication medium selection mechanism. The rationale would have been that with signal strength adjustment mechanism, the communication medium selection mechanism can yield more efficient and optimal medium communication medium for communication.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Referring to the PTO Form 892, references are cited to show similar method and system of communicating through different communication medium.

13. Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

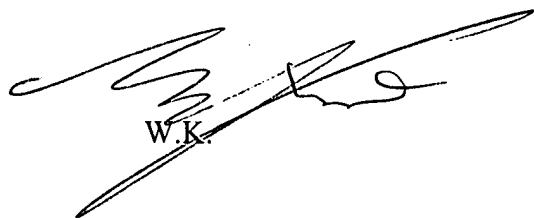
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wei-po Kao whose telephone number is (571)270-3128. The examiner can normally be reached on Monday through Friday, 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

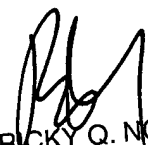
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W.K.



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SUPERVISORY PATENT EXAMINER